

Amendments to the Abstract:

Please replace the Abstract on page 31 of the present application with the following Abstract. A clean copy of the Abstract identified as page 31 is attached for scanning purposes by the USPTO. No new matter has been added.

~~The invention relates to a~~ A medical X-ray device 5 arrangement for producing three-dimensional information of an object 4 in a medical X-ray imaging. ~~The medical X-ray device 5 arrangement comprises:~~ an X-ray source 2 for X-radiating the object from at least two different directions; ~~a~~ detector 6 for detecting the X-radiation to form projection data of the object 4; ~~a computational device means~~ 15 for modelling the object 4 mathematically utilizing the projection data to solve the imaging geometry and/or the motion of the object, where the solving concerns either some or all parts of the imaging geometry and/or the motion of the object. ~~The computational device and the medical X-ray device 5 arrangement comprises means 15 for utilizing utilizes~~ said projection data and said mathematical modelling of the object in Bayesian inversion based on Bayes' formula

$$p(x, \theta | m) = \frac{p_{pr}(\theta) p_{pr}(x) p(m | x, \theta)}{p(m)}$$

to produce three-dimensional information of the object.